

The Piezomodulus of Polycrystalline BaTiO_3 as Dependent on Unidirectional Pressure

57-28-3-14/33

the sample with 36 kg/cm^2 . The piezomodulus was determined according to the load produced in the faces of the sample on removal of the additional load (in contrast to the usual method of References 5, 6 and 7, where the piezoelectric polarization caused by the entire applied pressure is measured). The obtained data show that the piezomodulus of barium titanate decreases on a rise of pressure, as it follows from the assumption of an orientating action of the pressure upon the spontaneous polarization. Due to this orientation the polar moment of the domain of spontaneous polarization decreases along the pressure axis and increases at right angles to it. A decrease in the spontaneous polarization along the pressure axis according to the above-given formula (1) leads to a decrease in d_{33} . An additional polarizing field orientates the spontaneous domains in the direction of the field and thus diminishes the effect caused by the unidirectional pressure. It is further shown that the reciprocal value of d_{33} is linearly dependent on pressure. A deviation from the linearity is observed at pressures above 350 kg/cm^2 . In the domain where the linear dependence is preserved, the relation can be expressed by an empirical

Card 2/4

The Piezomodulus of Polycrystalline BaTiO_3 as Dependent on Unidirectional Pressure 57-28-3-14/33

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet
(Dnepropetrovsk State University)

SUBMITTED: August 10, 1957

1. Barium titanate---Electrical properties 2. Barium titanate
---Pressure 3. Pressure---Electrical effects 4. Piezoelectric
materials---Properties

Card 4/4

KOLOMOYTSEV, F.I.; IZHAK, I.A.

Depolarization discharge in barium titanate and its relation to
the piezo effect. Fiz.tver.tela 1 no.12:1791-1793 D '59.
(MIRA 13:5)

1. Dnepropetrovskiy gosudarstvennyy universitet.
(Barium titanate crystals)
(Piezoelectricity)

ACCESSION NR: AR4034480

S/0058/64/000/003/E049/E050

SOURCE: Ref. zh. Fiz., Abs. 3E385

AUTHOR: Izhak, I. A.

TITLE: Effect of pressure on the dielectric losses of a ferroelectric ceramic

CITED SOURCE: Nauchn. zap. Dnepropetr. un-t, v. 61, 1963, 49-51

TOPIC TAGS: ferroelectric ceramic, dielectric loss, pressure effect, dielectric loss pressure variation, orienting effect of pressure, nonpolar effect of pressure, polar action of field, orienting action of field.

TRANSLATION: The effect of unilateral pressure on the dielectric losses of ferroelectric ceramics of different compositions is investigated. The electrodes were deposited on a surface perpendicular

Card 1/2

ACCESSION NR: AR4034480

to the compression axis on some ceramics and parallel to the compression axis on others. In the former case the dielectric losses decreased, up to a certain ac field intensity, following application of pressure (500 atmospheres), and in larger fields they increase following application of pressure. The field at which the pressure effect reverses sign depends on the pressure and on the composition of the ceramic. In measurements in a perpendicular direction the loss increases upon application of pressure in relatively weak fields and decreases in stronger fields. A qualitative explanation of the observed effects is based on the orienting non-polar effect of unilateral pressure and on the orienting polar action of the electric field. L. Kholodenko.

DATE ACQ: 10Apr64

SUB CODE: PH

ENCL: 00

Card 2/2

IZHAK, I.G.; KEL'MANZON, S.K.; IZOTOVA, N.V.

Determination of the total fat by the trilonometric method, and
analysis for excess alkalinity in diluted soaps. Zav.lab. no.11:
1299-1300 '59. (MIRA 13:4)

1.Kombinat "Apatit".
(Soap-- Analysis)

IZHAK, I.G.

Determination of total neutral substances and organic acids
from the combined alkali. Zav.lab. 27 no.2:162-163 '61.
(MIRA 14:3)

1. Kombinat "Apatit".
(Soap—Analysis)

IZHAK, I.G.

Method for determining fluorine in apatite-nephelina ores and
apatites. Zav.lab. 28 no.8:907 '62. (MIRA 15:11.)

1. Kombinat "Apatit".
(Apatite) (Fluorine--Analysis)

IZHAK, I.G.

Determination of strontium and phosphates in apatite-nepheline products. Zav.lab. 29 no.5:547 '63. (MIRA 16:5)

1. Kombinat "Apatit".
(Strontium--Analysis) (Phosphates) (Nepheline)

IZHAK, I.G.

Colorimetric determination of potassium by dilituric acid. Zav.
lab. 29 no.9:1060 '63. (MIRA 17:1)

1. Kombinat "Apatit."

IZHAK, I.G.

Complexometric determination of aluminum oxide with thioosalicylic acid
in nepheline concentrates. Zav.lab. 30 no.12:1449 '64.

(MIRA 18:1)

1. Kombinat "Apatit".

1. The following information was received from the Soviet Union on 12/1/79:
The Soviet Union has been working on the development of a new type of
engine for the propulsion of aircraft.

2. The following information was received from the Soviet Union on 12/1/79:

IZHAK, N.

Device for straightening automobile frames. Avt.transp.33 no.7:34
J1'55. (MLRA 8:12)

(Automobiles--Frames)

IZHAK, N.

The electric spark method of repairing automobile parts, Avt.
transp.33 no.10:21-22 0 '55. (MLRA 9:1)
(Electric spark) (Automobiles--Repairing)

IZHOLDINA, A. M., Cand Agr Sci -- (diss) "Cultivation of Corn
under Conditions of Udmurtiya." Mos, 1957. 20 pp (Mos Order of
Lenin Agricultural Acad im K. A. Timiryazov), 110 copies (KL,
47-57, 89)

19

L 24194-66 JMT(m)/EMP(t) JJP(c) JD/JG

ACC NR: AP6013284

SOURCE CODE: UR/0413/66/000/008/00E0/0080

INVENTOR: Epshteyn, A. L.; Izhvanov, L. A.; Korolev, Yu. M.; Stolyarov, V. I.;
Pobedash, N. V.

ORG: none

TITLE: Method of extracting molybdenum from the gaseous phase. Class 40,
No. 180800

SOURCE: Izobreteniya, promyshlennyye obratzay, tovarnyye znaki, no. 8, 1966, 80

TOPIC TAGS: molybdenum, molybdenum extraction

ABSTRACT: This Author Certificate introduces a method of extracting molybdenum from the gaseous phase with deposition of compact molybdenum on a heated substrate. To reduce the cost of extraction, molybdenum hexafluoride is used as the initial material. (ND)

SUB CODE: 13, 11/ SUBM DATE: 17Aug64/ ATD PRESS: 4245

Card 1/1

UDC: 669.283

USSR / Cultivated Plants. Cereals.

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34654

Author : Izboldina, A. H.

Inst : Moscow Agriculture Academy imeni K. A. Timiryazova.

Title : Technical Agronomy Methods of Raising Corn in Udmurtin.

Orig Pub : Dokl. Mosk. s.-kh. akad. im. K. A. Timiryazova, 1957, vyp. 28, 196-202.

Abstract : No abstract given.

Card 1/1

43

SHOSTAKOVSKIY, M.F.; KALABINA, A.V.; TRUFANOVA, A.I.; IZHBOLDINA, A.T.

Synthesis and transformations of vinyl aryl ethers. Report No.5: Chemical transformations of vinyl ethers of o-, m-, p-cresols and p-tert-amyl phenol. Izv. Fiz.-khim. nauch.-issl. inst. Irk. un. 5 no.1:101-110 '61. (MIRA 16:8)

(Ethers) (Phenol) (Cresol)

KOZHOV, M.M.; IZHBOLDINA, L.A.; KAPLINA, G.S.; SHAPOVALOVA, I.M.;
CHERENKOVA, V.I.

Littoral and sublittoral benthos of Lake Baikal along the
southeastern shore. Gidrobiol. zhur. 1 no.4:3-11 '65.
(MIRA 18:10)

1. Baykal'skaya biologicheskaya stantsiya Irkutskogo
gosudarstvennogo universiteta.

AVDEYEV, B.S.; SMAGORINSKIY, B.S., red.; IZHBOLDINA, S.I., tekhn.
red.

[Use of natural gas in plants] Prirodnyi gaz na zavode.
Volgograd, Volgogradskoe knizhnoe izd-vo, 1961. 83 p.
(MIRA 17:3)

1. Glavnyy spetsialist tekhnicheskogo otdela Volgorodskogo
sovnarkhoza (for Avdeyev).

32-7-42/49

AUTHORS: Mazurek, A.A., Izhedorova, A.G.

TITLE: The Application of Infrared Lamps in Analytical Practice
(Primeneniye infrakrasnoy lampy v analiticheskoy praktike)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 7, pp. 878 - 878 (USSR)

ABSTRACT: On the occasion of the analysis of many anorganic compounds the necessity arises to evaporate a solution until it is completely dry, as, for instance, when determining the alkali metal content in zinc salts, cobalt, manganese, etc. - For this purpose a solution is dried out under an infrared lamp. The device concerned consists of a aluminum body and the infrared lamp. By increasing or reducing the distance between the lamp and the vessel it is possible to regulate temperature ad libitum. There is 1 table.

Card 1/2

1. USHKOV, F. V.; IZIEVSKAYA, G. M.
2. USSR (600)
4. Hollow Brick, Tile, etc.
7. Hollow ceramic stone blocks for walls. Blul. stroi. takh. 9 no. 23 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Unc..

1. USHKOV, F. V., IZHEVSKAYA, G. M.
2. USSR (600)
4. Tile Construction
7. Hollow ceramics and their use in the construction of building walls, Stek. i ker.,
10, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

ANTONOV, K.K., chlen-korrespondent; IZHEVSKAYA, G.M., kandidat tekhnicheskikh nauk.

Wall construction in many-storied framed buildings. Gor.khoz.Mosk. 27 no.8:
20-23 Ag '53. (MLRA 6:8)

1. Akademiya arkhitektury SSSR (for Antonov).

(Walls)

KASHIRSKIY, A.A.; USHKOV, F.V.; IZHEVSKAYA, G.M.

On the heat insulation qualities of hollow ceramic bricks. Gor.khoz.
Mosk. 28 no.4:9-15 Ap '54. (MLRA 7:6)
(Hollow bricks)

IZHEVSKAYA, V.M.

IZHEVSKAYA, V.M., kandidat tekhnicheskikh nauk.

Air conditioning of the proofing chamber in commercial bakeries.
Trudy Stroi.inst. Mosgorispolkoma no.4:40-47 '53. (MIRA 8:3)
(Bakers and bakeries—Air conditioning)

Textbook on the Design of Aviation Instruments (Cont.)

SC11-199

COVERAGE: The book presents design methods and bases of calculation for common pressure-measuring instruments used in aircraft (altimeter, speed indicator, Mach-number indicator). Calculation sequence and methodical directions for designing instruments are given. Problems treated in the existing literature are not considered. Problems treated insufficiently in the literature are discussed in more detail, for certain problems in engineering calculations of instruments, new solutions are presented. The recommendations given regarding the general sequence of design calculations of instruments and the details of their construction represent possible variants of solutions which may be supplemented and modified. Ch. I was written by T.P. Medvedevaya-Orlovaya and V.M. Izhevskaya; Ch. II by N. Ya. Vovchenko; Ch. III by T.P. Medvedevaya-Orlovaya, Ch. IV by V.M. Izhevskaya; and Ch. V by A.P. Turkevich and Z.T. Chistyakovaya. No personalities are mentioned. There are 18 references, all Soviet.

TABLE OF CONTENTS:

Foreword

3

Ch. I Sensitive Elements of the Membrane Type
 Determining the structural parameters of membranes
 Selection of standard membranes

5

6

6

Card 2/7

Textbook on the Design of Aviation Instruments (Cont.)

SOV/4599

Sheet 2. Corrugated profile for manometer housing with linear pressure characteristics	28
Sheet 3. Three-membrane manometer housing with attenuated linear rate characteristics in two regions	29
Sheet 4. Corrugated profile of manometer housing with linear rate characteristics	30
Sheet 5. Corrugated profile of a membrane with linear rate characteristics	31
Sheet 6. Three-membrane manometer housing for speed indicator with attenuated linear rate characteristics in two regions	32
Sheet 7. Aneroid block with linear altitude characteristics	33
Sheet 8. Aneroid housing with linear altitude characteristics	34
Sheet 9. Aneroid block with linear altitude characteristics	35
Sheet 10. Aneroid block with linear altitude characteristics	36
Sheet 11. Aneroid housing with linear altitude characteristics	37
Sheet 12. Profile of aneroid-housing membrane with linear altitude characteristics	38
Sheet 13. Corrugated profile of aneroid housing with linear altitude characteristics	39

Card 4/6

Textbook on the Design of Aviation Instruments (Cont.) SOV/4599

Ch. IV. Aerodynamic-Type Speed Indicator	79
Brief information on the purpose and construction of the instrument and calculation formulas	79
Calculation of the design elements of the instrument	81
Analysis of the errors in the instrument	90
Instrument errors of speed indicators	91
Special features of the calculation of transducers	100
Appendix	101
Tables of values of the dynamic pressure for speeds up to 3000 km/hour	101
Ch. V. Mach-Number Meter	107
Purpose and design of the Mach-number meter	107
General directions for calculation of the instrument	110
Calculation of the design elements	112
Estimate of the errors of the instrument	124
Designing the Mach-number transducer	125
Appendixes	125
I. Kinematics of a lever-carrier indicating mechanism	125
II. Calculation example for a Mach-number meter with a tangential mechanism	129

Card 6/6

USSR/Geography - Marine resources

Card 1/1 Pub. 86 - 8/36

Authors : Zenkevich, L. A., Mem. Corresp., Acad. Sc., USSR; Ishereldiy, G. N.
and Lednev, V. A.

Title 1 Researching the resources of seas and oceans

Periodical : Priroda 44/6, 63 -65, Jun 1955

Abstract : A sketch is presented of the history of the Permanent International Council for the Exploration of the Seas from its inception in 1902 to its 42nd session in Paris (3--12 October, 1954). The council was found to represent mainly countries of the Northwest of Europe although delegates from the Soviet Union and the USA attended as auditors. Twelve of the papers read dealt with herring. Some attention was also paid to the discovery of sea perch in the vicinity of Iceland.

Institution :

IZHEVSKIY, G. K.,

"Supplement to Moiseyev's Report," Oceanographic Research of the Northwestern Part of the Pacific Ocean, Moscow, Izd-vo AN USSR, 1958. (This is a supplement of Moiseyev's report on piscatology of the Northwest Pacific, but it is not clear from the text whether the author refers to the article by Moiseyev in this collection or to some other report. In this supplement the author complains that the fishing industry is insufficiently provided with recent hydrological and climatic data. It urges an improvement in sharing the results of investigations obtained by the Academy of Sciences with Soviet fishers. *Trudy Akad. Nauk SSSR* 1958, 1: 134-137)

COVERAGE: This collection of articles reports are the results of observations made in the Pacific by the Institute of Oceanology of the Academy of Sciences, USSR. In 1949, the Institute launched a systematic five-year program of scientific exploration of certain hydrographic peculiarities of the Soviet Pacific area. The operations were carried out as a "Complex Oceanographic Expedition," using the motorboat Vityaz' as its base. The Expedition worked in collaboration with the Hydrographic Institute of the Soviet Navy (VMS), the Pacific Institute of Piscatology and Oceanography and some 40 other institutes of the Academy of Sciences. Between 1949 and 1954, 18 trips were made, covering about 130,000 miles. Among the subjects of direct concern were: meteorology, hydrology, oceanography, hydrochemistry, sedimentation, geography of the littoral, geology and contours of the sea bottom, fauna plankton, microbiology, and gravimetry. Twenty-eight authors contributed to the collection which consists of 27 articles.

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619410002-8

IZHEVSKIY, Georgiy Konstantinovich; DOBROVOL'SKIY, A.D., prof., doktor
geogr. nauk, nauchnyy red.; KOSSOVA, O.N., red.; SOKOLOVA, I.A.,
tekh. red.

[Oceanological principles relating to the fishery productivity
of seas] Okeanologicheskie osnovy formirovaniia promyslovoi
produktivnosti morei. Moskva, Pishchepromizdat, 1961. 215 p.
(MIRA 14:5)

(Marine biology)

IZHEVSKIY, G.K.

[The system basis of forecasting oceanographic conditions and the reproduction of commercial fishes] Sisternnaia osnova prognozirovaniia okeanologicheskikh uslovii i vosproizvodstva promyslovyykh ryb. Moskva, Vses. nauchno-issl. in-t morskogo rybnogo khoziaistva i okeanografii, 1964. 165 p. (MIRA 17:11)

SHOSTAKOVSKIY, Mikhail Fedorovich; VLASOV, Viktor Mikhaylovich;
SHOSTAKOVSKIY, Zakharly Fedorovich; IZHEVSKIY, Konstantin
Mikhaylovich; NIKOLAYEV, V.K., red.

[Curative polymers] Tselebnye polimery. Moskva, Izd-vo
"Znanie," 1965. 43 p. (Novoe v zhizni, nauke, tekhnike.
VIII Seriya: Biologiya i meditsina, no. 6) (MIRA 19:51)

1. Chlen-korrespondent AN SSSR (for Shostakovskiy).

ITREVSII, K. M.

USA / Medicine - Societies, Medical Jul/Aug 48
Medicine - Venereal Diseases

"Protocol of Meetings of the Moscow Dermato-
Venereological Society," V. Ya. Artuyunov, K. M.
Izhevskiy, 2½ pp

"Vest Venerol i Dermatol" No 4

Reports on session held 25 Mar 48. Work of
Society during 1946 - 1947 was discussed.

34/4/188

...TY, K. N.

PA 34/49T85

USSR/Medicine - Venereal Diseases, Clinics Jul/Aug 48
Medicine - Clinics

"History of the Organization of the Kazan Dermato-
Venereological Clinic," K. M. Izhevskiy, Clinic of
Dermato-Venereol Diseases, Second Moscow Med Inst
Imeni I. V. Stalin, 5 pp

"Vest Venerol i Dermatol" No 4

Describes organization of subject clinic with special
reference to the work of Prof A. G. Ge (died 1907).

34/49T85

IZHEVSKIY, K.M.; GURVICH, O.Ye.

Venicular dermatitis caused by contact with plants. *Pediatrilia*,
no.5:86-87 S-O '55. (MIRA 9:2)

1. Iz detskogo otdeleniya statsionara po kozhnym boleznyam (zav. K.M. Izhevskiy) pri 5-m kozhro-venereologicheskom dispansere (glavny vrach G.A. Plotkin) Stalinskogo rayona Moskvu.
(DERMATITIS, CONTACT, etiol. and pathogen.
plants)

IZHEVSKIY, K. M. (Moskva)

"Vitreous body" in some skin diseases. Vest. dermat. i ven. no. 3:
51-54 '62. (MIRA 15:6)

1. Iz statsionara po kozhnym boleznyam pri dispansere No. 5
(glavnyy vrach G. A. Plotkin)

(SKIN—DISEASES) (VITREOUS HUMOR)

IZHEVSKIY, E.M.

Diagnosis and treatment of pruritic processes in the anus.
Vest. dermat. i ven. 38 no.5:87-90 My '64.

(MIRA 18:12)

1. Stacionar po kozhnym boleznyam pri 5-m Ob'yedinenom
kozhno-urologicheskom dispansere (glavnyy vrach G.A. Plotkin),
Moskva. Submitted Aug. 9, 1962.

IZHEVSKIY, M. N.

Izhevskiy, M. N. (Leningrad). Practice Calculating Dimension-chain Systems

p. 45

Interchangeability, Accuracy and Measuring Methods in Machine Building, Moscow, Mashgiz, 1958, 251 pp. (Sbornik Nauchno-tekhn. obschch. mashinostroyitel'noy promyshlennosti, Leningradskoye oblast pravleniya, kn. 47).

This collection of articles deals with the topics discussed at the 3rd Leningrad Sci. and Engineering Conference on Interchangeability, accuracy and Inspection Methods in Machine-building and Instrument-making, held 18-22 Mar 1957.

12 H. 2 vsky, M. V.

9(6)	PHASE I BOOK EXCITATION	SOV/2557
	Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Leningradskoye oblastnoye pravleniye	
	Provolochnaya tenzometriya (Theory and Application of Wire Strain gages) Moscow, Mashgiz, 1959. 138 p. (Series: Leningradskiy dva nauchno-tekhnicheskoy propagandy, kn. 31) 3,500 copies printed.	
	Sponsoring Agency: Nauchno-tekhnicheskoye obshchestvo priborostroi- tel'noy promyshlennosti.	
	Ed.: A.M. Turichin; Ed. of Publishing House; M.A. Chkas; Tech. Ed.: L.V. Shchetinina; Managing Ed. for literature on the Technology of Machine Building (Leningrad Division, Mashgiz); Ye.F. Mamov.	
	PURPOSE: This collection of papers is intended for engineers, scientific workers, and technicians making calculations for strength in machinery.	
	COVERAGE: This is a third issue of the collection of scientific papers presented at the Leningrad Scientific and Technical Conference on the Theory and Use of Wire Strain Gages, held in May 1959. The papers describe the use of instruments with wire strain gages to investigate different parameters of machine parts and mechanisms during operation. No personalities are men- tioned. References follow several of the papers.	
	Matakevich, A.A. Use of Wire Strain Gages for Measuring Small Forces, Pressures, and Fluid-flow Velocities 35	
	Shal'mikov, G.I. Experience With the Use of Vibrometers With Wire Strain Gages for Measuring Amplitude and Frequency of the Vibra- tions of Small Surfaces 50	
	Arshanskiy, B.E. Vibrometers With Wire Strain Gages 55	
	Petrov, L.V. Universal Cathode-ray Oscillographic Equipment for Experimental Investigation of Machines. Possibilities for Improve- ment 60	
	Dumov, P.D. Counter for Strain Cycles (Deformations) of a Given Magnitude 73	
	Baranov, D.S. Principles of Construction of Multichannel Strain- gage Instruments for Simultaneous Observation and Recording of a Series of Processes 79	
	Arshanskiy, B.E., and L.A. Lofter. Semiconductor-type Voltage Converter for Feeding Strain-gage Instruments from Low-voltage D-C Sources 92	
	Polyakov, A.A. Current-wave Recording in Measuring Dynamic Processes With Strain Gages 100	
	Grishbovskiy, V.V. Method of Welding Circuit Wires in an Experimental Investigation of the Deformations in Rotating Parts at Temperatures up to 4000 C. 104	
	Miron, I.D. Problems of Calibrating Strain-gage Instruments During Operation 129	
	Ishchinskaya, M.N. Accidental Errors in Dynamic Strain Measurement 135	
	Koltyshev, A.S. Machine Tools for Winding Wire Grids 135	
	AVAILABLE: Library of Congress	

L 05080-6/ EWT(d)/FSS-2

ACC NR: AP6Q13306

SOURCE CODE: UR/0413/66/000/008/0098/0098

AUTHORS: Izhin, M. I.; Alekseyev, L. A.; Babashkin, V. I.

ORG: none

TITLE: A method for discrete summation of signals of Class 42, No. 180858

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 98

TOPIC TAGS: signal coding, signal processing

ABSTRACT: This Author Certificate presents a method for discrete summation of signals associated with the encoding of information with a fixed weight. The method increases the interference-free nature of the process. Binary symbols of the code group, which are accepted simultaneously on N channels, are linearly added with subsequent limitation of the sum to N levels by clippers of the sum. The solution in regards to the transmitted code group is taken by detecting the specific number of the largest (based on the number of ones) or smallest (based on the number of zeros) values of the sum.

SUB CODE: 09/ SUBM DATE: 10May65

Card 1/1

fv

UDC: 681.142.621.374

IZHOGIN, V.M., inzh. (Chelyabinsk)

Fix precise time limits for clearing land for pipeline routes.
Stroi. truboprov. 5 no.10:24 0'60.
(Pipelines) (MIRA 13:10)

IZHIKOV, Aleksandr Andreyevich, inzhener; SEDOV, Aleksandr Pavlovich,
inzhener; GURIN, A.V., redaktor; KUZ'MIN, D.G., tekhnicheskii redaktor

[Bricklaying and facing work] Kamennye i oblitsovochnye raboty.
Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1956. 262 p.
(Bricklaying) (MLRA 9:12)

IZHOKA, V., elektromekhanik

Improve the quality of the construction and operation of T-101
motorships. Rech.transp. 21 no.7:55 JI '62. (MIRA 15:8)

1. Narymskoye prorabstvo Kolpashevskogo tekhnicheskogo uchastka
Obского basseyna.

(Motorships)

1. The speed of disintegration of petroleum products in water and soil of land in Sanitarin, Moscow 1950, 1 (9-13)

If petroleum remains upon the surface of water for a period extending a few months it undergoes separation into two layers. The superficial layer is rich in bacterial flora and more rapid disintegration occurs due to the access of atmospheric air. In the deeper layer particles of petroleum which escape disintegration at the surface fall to the bottom. The bacterial flora there is considerably poorer than at the surface and the rate of disintegration is at least ten times slower. Different soils show no substantial influence in producing different rates of disintegration of petroleum or its by-products. Sand and fertile soils both cause a fast rate of disintegration of petroleum or its by-products. Sand and fertile soils both cause a fast rate of disintegration, but it is at least two to three times slower than the rate occurring at the surface.

Collis - (World Medical Abstracts)

So: Medical Microbiology & Hygiene Section IV, Vol. 3, No. 7-12

Production of Metallic Yttrium

SOV/136-59-1-11/24

was flushed several times with argon and before reduction was started the furnace was filled with this gas ($O_2 \leq 0.01\%$, $N_2 \leq 0.01\%$, $CO_2 \leq 0.01\%$) to a pressure of 200-300 mm Hg. The furnace temperature was measured with a type OPPIR-09 optical pyrometer and adjusted to reach 800-850°C in about 10 minutes and 1500-1550° in about 80 minutes after starting (Fig 1). The reduction occurred mainly at 850-900°C in 5-10 minutes. The higher-temperature treatment was to melt the metal and separate it from slag. The product containing 1% calcium, was remelted at 1500-1550°C in argon at 100-150 mm Hg to reduce the calcium content. The author gives an analysis with 98.85% yttrium and 0.035% calcium. The outer layers of the yttrium ingots were more heavily contaminated with tantalum than the centre (Fig 2). Normal recoveries of yttrium in reduction with a 20% excess of calcium were 70-75%, but sometimes rose to 80-85%. Best results were obtained when the charge in the crucible was compressed at about 10 kg/cm² and when its depth exceeded 50 mm (crucible diameter 40 mm, height 150 mm). Yttrium was

Card 2/3

L 58404-65

ACCESSION NR: AP5015930

size. Electrolytic and distilled beryllium is more ductile than that obtained by reduction with magnesium. Beryllium extruded from hot-compacted powders with a grain size of $\sim 50 \mu$ (the mean grain size $20-25 \mu$) had the highest strength and ductility at both room and elevated temperatures (up to 600°C). For example, at room temperature the tensile strength was 45 kg/mm^2 , the true tensile strength— 48 kg/mm^2 , the elongation— 3.6% and the reduction in area— 4.0% ; at the temperature of maximum ductility, the elongation and reduction of area was 60 and 66%, respectively. Mechanical properties of sintered and of hot-compacted beryllium differed only slightly. But, generally, nonextruded, sintered and hot-compacted beryllium had comparatively low strength and ductility. However, after extrusion, the strength and ductility increased by 2–3 times; the yield strength increase was less pronounced. Cast beryllium was more brittle than beryllium prepared by the powder-metallurgy method; it remained brittle even with heating to 400°C . The values of the strength and ductility obtained in compression tests were noticeably higher than those obtained in tension tests. Orig. art. has: 14 figures and 2 tables.

(15)

ASSOCIATION: none

SUBMITTED: 12Jun64

ENCL: 00

SUB CODE: 101, 10

NO REF 507: 003

OTHER: 006

AND PRESS: 4042

Card 212 600

L 01798-66 ENT(m)/EPF(n)-2/ETP(t)/ETP(b) IJP(c) JD/MI/JG

ACCESSION NR: AP5021497

UR/0370/65/000/004/0097/0104

669.2/.049.6.296.297

AUTHOR: Nisel'son, L. A.^{44,55} (Moscow); Stolyarov, V. I.^{44,55} (Moscow); Khlyanov, L. A.^{44,55} (Moscow); Korolev, Yu. M.^{44,55} (Moscow)

TITLE: Separating zirconium^{44,55} and hafnium^{44,55} by fractionating their tetrachlorides

SOURCE: AN SSSR. Izvestiya. Metally, no. 4, 1965, 97-104

TOPIC TAGS: hafnium, zirconium, fractional distillation, metal purification

ABSTRACT: Mixtures of $ZrCl_4$ and $HfCl_4$ are experimentally separated by fractionation in metal columns with kilogram charges. The experimental equipment is shown in fig. 1 of the Enclosure. The results are tabulated and graphed. It was found that direct fractionation of the tetrachloride mixture is highly effective as a means for separating hafnium and zirconium. When the initial tetrachloride mixture contains 1.5-2.5% Hf, fractionation produces more than 50% Zr containing about 0.05% Hf. Up to 40% of the Hf in the original charge is concentrated in the head fractions with an average hafnium content of 20-25%. With initial hafnium contents of 16.6 and 13.5%, the maximum concentration of Hf in the head fractions of the

Card 1/3

L 01798-66

ACCESSION NR: AP5021497

distillate is 85.6 and 70.8% respectively. The experimental conditions produced a yield of 30-40 g/cm²·hr. Orig. art. has: 4 figures, 5 tables.

ASSOCIATION: none

SUBMITTED: 25Jul64

ENCL: 01

SUB CODE: GC, MM

NO REF SOV: 007

OTHER: 002

Card 2/3

L 01798-66

ACCESSION NR: AP5021497

ENCLOSURE: 01

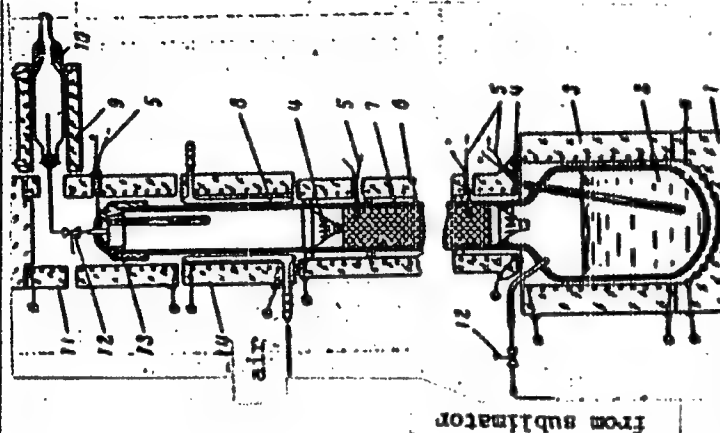


Fig. 1. Diagram of the fractionation column for separating a $ZrCl_4$ - $HfCl_4$ mixture: 1--main electric heater for the still; 2--column still; 3--auxiliary electric heater for the still; 4--cone holding the packing; 5--thermocouples; 6--heat insulation for the column; 7--packing; 8--air-cooled sleeve for the fractionating column; 9--electric heater for the fraction receiver; 10--receiver for the hafnium fractions; 11--electric heater for the head section of the column; 12--needle valves; 13--head section of the fractionating column; 14--electric heater for the fractionating column

Card 3/3

DAVIDENKOV, N.N. [deceased]; SIDOROV B.A.; SHESTOPALOV, L.M.; MIROMOV, N.F.;
POGORAD, N.M.; IZHVANOV, L.A., KOSTOGAROV, S.B.

Mechanical properties of beryllium. Atom. energ. 18 no.6:608-616 Je '65.
(MIRA 18:7)

GASKAROV, N.; PETRAKOV, D.; IZIBAYEV, I.

Results of cooperation. Pozh.delo 8 no.2:14 P '62. (MIRA 15:2)
(Coke industry—Fires and fire prevention)

5.4600

S1800
S/020/60/133/02/40/068
BC04/EO64

AUTHORS: Izidinov, S. U., Borisova, T. I., Veselovskaya, V. I.
TITLE: Electrochemical and Photoelectrochemical Behavior of the Silicon Electrode 7
PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 2, pp. 392 - 395

TEXT: The authors investigated monocrystalline silicon of the n- and p-type with $p = 1 \text{ ohm.cm}$ and crystallographic (111) orientation of the surface. A cinematographic incandescent lamp served as light source ($\sim 10^{-1} \text{ cal/cm}^2 \cdot \text{sec}$). The silicon surface was etched in hot KOH or in $\text{HF} + \text{HNO}_3$, or ground. Fig. 1 shows the dissolution of Si under hydrogen separation in KOH solutions of 0.1 - 10 N. The time change in potential occurring at the same time is the same for n- and p-Si, and depends on how the surface has been treated. Fig. 2 shows the curves of the anodic polarization for both types immediately after plunging into the solution and after the stable state has been reached. There is no essential

Card 1/3

81866

Electrochemical and Photoelectrochemical
Behavior of the Silicon Electrode

S/020/60/133/02/40/663
B004/3064

difference between the two types of silicon apart from the fact that the maximum potential of the anodic curve is 200 mv more positive for the p-type than for n-Si. The photogalvanic activity ΔV of the system is changed by etching. In the case of p-Si ΔV rises from zero to the constant value of 600 mv; in the case of n-Si ΔV becomes not more than 10-15 mv (Fig. 3). Oxidation of the surface both by means of anodic polarization and by chemical etching or introduction of oxygen into the solution exerts an influence upon the photoelectric effect; in the case of n-Si ΔV is increased to 50-100 mv and ΔV reduced in p-Si to 200-400 mv. After the dissolution of the oxide film the photoelectric effect is increased in p-Si and decreases with n-Si (Fig. 4). The difference of ΔV for p- and n-Si in the presence of an electric field is caused by the fact that in the dissolution the surface of p-Si approaches the n-type, whereas oxidation acts in the opposite direction. Though the measured static potentials are the same for both types, the distribution of the change in potential is different at the interface of silicon - solution. The etching off of the mechanically defective layer leads to the increase of ΔV in p-Si. Light acts mainly upon the space charge which can be also seen from the practically unchanged

Card 2/3

B1566

Electrochemical and Photoelectrochemical
Behavior of the Silicon Electrode

S/020/60/133/02/LC/Q58
B004/B064

hydrogen separation in the case of an exposure to light. The independence of the rate of irreversible dissolution of silicon in alkali of its type is due to the action of two conjugate reactions of oxidation and reduction. There are 4 figures and 7 references: 1 Soviet, 5 British, and 1 German.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova
(Institute of Physical Chemistry imeni L. Ya. Karpov)

PRESENTED: March 18, 1960, by A. N. Frumkin, Academician

SUBMITTED: March 16, 1960

Card 3/3

4

27883

S/020/61/140/001/022/024
B130/B101

24.7700

AUTHORS: Lazorenko-Manevich, R. M., and Izidinov, S. O.
TITLE: Kinetics of cathodic processes on semiconductor electrodes
with the participation of valence electrons
PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 1, 1961, 172-175

TEXT: Starting from M. Green's paper (Ref. 1, see below) on the theory of cathodic processes on semiconductors, the authors study the effect of the participation of valence electrons on the form of kinetic equations. The case where the portion of valence electrons is equal to unity, is considered first. For the sake of simplicity, it is assumed that no surface states (Ref. 1) occur and that the potential ψ_1 is zero. η_h is the potential shift in the Helmholtz part of the double layer on the passage of a current of the density i ; $\Delta\psi_{v.ch.}$ is the potential shift in the volume charge layer on the semiconductor; Δq is the change in charge on the ion sheath during the passage of current. If η is the measured overvoltage, then $\eta = \eta_h + \Delta\psi_{v.ch.}$ (1) $i = i_0 (C/C_0) \exp(-\alpha\eta F/RT)$ (2) will be valid. Here.
Card 1/4

27883

S/020/61/140/001/022/024

B130/B101

Kinetics of cathodic processes ...

i_0 is the exchange-current density, C is the electron concentration on the semiconductor surface on polarization, and C_0 is the same at $i = 0$. For the sake of simplicity, it is assumed that current passage does not disturb the electron equilibrium in the semiconductor:

$C \approx C_0 \cdot \frac{RT}{\alpha F} \ln \frac{i_0}{i} = \eta_h$ (3) is obtained from Eq. (2). After substitution in (1) one obtains $\eta - \Delta\psi_{v.ch.} = \frac{RT}{\alpha F} \ln \frac{i_0}{i}$ (4). $\eta + \frac{1-\alpha}{\alpha} \Delta\psi_{v.ch.} = \frac{RT}{\alpha F} \ln \frac{i_0}{i}$ (5)

is derived from (2). i_0 is not identical in Eqs. (4) and (5), since the concentrations of the electrons participating in the reactions are not equal at $\eta = 0$.

$\eta = \frac{RT}{nFi_0} i$ (6) is found for $i \rightarrow 0$. If the valence electrons participate in the reactions, this relation exists not between η and i , but between η_h and i . Accordingly, $\eta - \Delta\psi_{v.ch.} = -RTi/nFi_0$ (7). The ratio between η_h and $\Delta\psi_{v.ch.}$ depends on whether or not the semiconductor surface is degenerate. For a non-degenerate surface, $\Delta\psi_{v.ch.}$ is much greater than η_h .

Card 2/4

27883

S/020/61/140/001/022/024
B130/B101

Kinetics of cathodic processes ...

and is the major part of overvoltage. Therefore, polarizability is very high in this case. If the surface is degenerate, $\Delta\psi_{v.ch.}$ and η_h are commensurable. Polarizability is much lower here. Eq. (2) is also valid in the case of joint participation of valence and conduction electrons. The determination of the concentration of electrons entering the reaction from the two zones is, however, difficult. The proportion of valence electrons is calculated from a kinetic equation containing an experimentally measurable quantity. i_v is the current of valence electrons; i_c is the current of conduction electrons. $i_v + i_c = i$ (8), $i_v/i = x$ (9). If $i \ll i_o$, $-\frac{RT}{nF} \frac{i_v}{i_{ov}} = \eta_h$ and $-\frac{RT}{nF} \frac{i_c}{i_{oc}} = \eta$ (10), where i_{ov} is the exchange current of the reaction with the participation of valence electrons and i_{oc} with the participation of conduction electrons. $i_{ov} + i_{oc} = i_o$ (11).

X

$$-\frac{RT}{nF} \frac{i}{i_o} = \frac{\eta(\eta - \Delta\psi_{v.ch.})}{\eta - \Delta\psi_{v.ch.}(1 - x)} \quad (12) \text{ is obtained from Eqs. (6), (10), (11),}$$

Card 3/4

27883

S/020/61/140/001/022/024
B130/B101

Kinetics of cathodic processes ...

and (9). Similarly, the following expression is obtained for $i \gg i_0$, using Eqs. (4) and (5): $i = [i_0 \exp(-F\Delta\psi_{v.ch.}/RT) \exp(-i\alpha F\eta_{ll}/RT)] / (1-x) [1 - \exp(-F\Delta\psi_{v.ch.}/RT)]$ (14). These results are only correct in the absence of diffusion, and are most obvious in the polarization of silicon in alkaline solutions. Professor V. I. Veselovskiy, N. A. Aladzhhalova, T. I. Borisova, and B. M. Novakovskiy are thanked for discussions. There are 7 references: 4 Soviet and 3 non-Soviet. The reference to the English-language publication reads as follows: Ref. 1: M Green, Modern Aspects of Electrochem, 2, 6, London, 1959.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

PRESENTED: April 10, 1961. by A. N. Frumkin, Academician

SUBMITTED: April 4, 1961

Card 4/4

IZIDINOV, S.C.; BORISOVA, T.I.; VESELOVSKIY, V.I.

Electrochemical and photoelectrochemical behavior of the silicon
electrode in acid and alkaline solutions. Zhur. fiz. khim. 36,
no.6:1246-1254 Je'62 (MIRA 1797)

1. Fiziko-khimicheskiy institut imeni Karpova, Moskva.

5.4500

39579

S/020/62/145/003/011/013
B101/B144

AUTHORS: Izidinov, S. O., Borisova, T. I., and Vaselovskiy, V. I.

TITLE: Characteristics of the photochemical behavior of the silicon-alkali interface

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 3, 1962, 598-601

TEXT: Exposure of the Si - KOH interface to light showed passivation of the Si electrode and activation of the passive electrode. Passivation occurred only with anodic currents $i_a < i_{a \max}$ at all KOH concentrations (10^{-3} - 20 N). In n-Si, the potential ψ becomes more negative, in p-Si more positive. The rate of passivation is inversely proportional to the time of exposure and increases as the potential and light intensity increase. $Z = k_2 \exp(i_{a \max} - i_a)$, where $i_{a \max} = k_3 i_{s-d}$ (i_{s-d} = self-dissolution current) holds for the number Z of absorbed light quanta. Complete photoactivation occurs only at the beginning of the passive state at $\psi = 100-300$ mv. At $\psi = 400-600$ mv, activation is incomplete. The potential range of complete activation is broadened in 10 N KOH by a rise of

Card 1/3

Characteristics of the photochemical ...

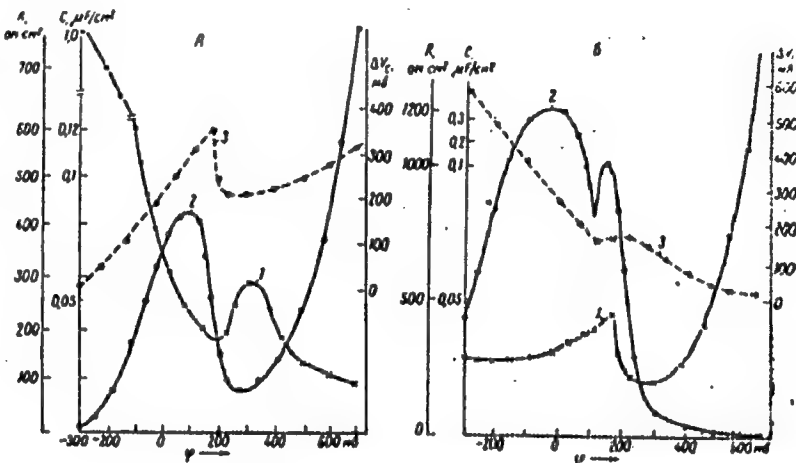
S/020/62/145/003/011/013

B101/B144

PRESENTED: April 4, 1962, by A. N. Frumkin, Academician

SUBMITTED: March 3, 1962

Fig. 3: (1) $C=f(\psi)$,
($\mu F/cm^2$); (2) $R=f(\psi)$,
($ohm \cdot cm^2$); (3)
 $\Delta V_c = \Delta V_p = f(\psi)$,
(mv). (A) for n-Si;
(B) for p-Si.



Card 3/3

VESKLOVSKIY, V.I.; BORISOVA, T.I.; YAKOVLEVA, A.A.; IZIDINOV, S.O.

"Some Specific Features of the Double Layer Structure and Electrode Process on Elemental and Oxide Semiconductors Ge, Si, Ag₂O, Ta₂O₅, TiO₂."

Report presented at the 11th meeting CITCE, Intl. Comm. of Electrochemical Thermodynamics and Kinetics, Moscow, 19-25 Aug 63.

Karpov Physico-Chemical Institute, Moscow, U.S.S.R.

IZIMBETOV, T.

Dissertation defended for the degree of Candidate of Philosophical Sciences
at the Institute of Philosophy 1962,

"Criticism of the Ideology of Modern Islam."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

MARTON, Tibor, dr.; IZINGER, Endre, dr.

Cancer of the common bile duct causing obstruction of the
colon and stomach. Magyar. sebész. 17 no.2:102-104. Ap'64.

1. A Központi Állami Kórház (igazgató: Fenyvesi, József, dr.)
Sebészeti Osztályának (főorvos: Marton, Tibor, dr.) közleménye.

*

IZINGER, E.F., akusherka

Work of a maternity home on a collective farm. Zdrav. Turk.
7 no.3:43-45 Mr'63. (MIRA 16:6)

1. Kolkhoz "Kommunism" Bayram-Aliyevskogo rayona.
(MATERNITY HOMES)

SECRET

KALMOS, Gyula, 1910-68, Yrma, Haid, Jansol, 205125, Jutit; Haidi (er-
vics of the Hungarian People's Army (Magyar Nepharsag) (Szeged, 1968).
1968-69).

The Role of Experiment 1 Thyroid Deficiency in Some Post-Operative
Reactions.

Summary, Kisérletes Orvostudomány, Vol 15, No 2, Feb 63, pp 11-17.

Abstract: [Hungarian summary] The authors conclude that the
post-operative traumatic reactions are not identical upon surgical and
chemical thyroidectomy. Resistance against post-operative trauma is
lowered upon complete thyroid removal but it is not affected by the hy-
pothyroidism obtained by treatment with methylthiouracil. Surgically thy-
roidectomized animals show no blood sugar elevation during post-opera-
tive trauma. The serum cholesterol level in dogs treated with methylthio-
uracil drops instead of rising. Thyroidectomized animals show a great
delay in the recovery of original serum albumin levels. Of ten referen-
ces, three are Eastern European, the rest is Western.

11/1

IZINGER, Endre, dr.

Gallbladder papilloma causing intermittent jaundice. Magyar
sebesz. 17 no.1:59-63 F'64

1. A Kozponti Allami ~~Korhaz~~ (igazgato: Fenyvesi, Jozsef, dr.)
Sebeszeti osztalyanak (foorvos: Marton, Tibor, dr.) kozlemereye.

*

IZINCSE, P.

IZINCSE, P. Let us be ready in time for the tasks of summer's end. P. 1.

Vol. 3, No 7, July 1956

ALLIAMI GAZDASAG

AGRICULTURE

Budapest, Hungary

So: East European Accession, Vol. 6, No. 2, Feb. 1957

IZINGEL, P.

Good work in harvesting. p. 10.

(ALLAMI HAZDASAG, Vol. 9, no. 6, June 1957. Budapest, Hungary)

SO: Monthly List of East European Accessions (MEAL) LC, Vol. 6, no. 9, Sep. 1957. Incl.

IZINGER, P.

The significance of early sowing. p. 4.

(Allami Gazdasag. Vol. 9, no. 7, July 1957. Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

Country : HUNGARY
Category : Cultivated Plants. Cereals. Leguminous Plants.
Tropical Cereals. M

Abs Jour : RZhBiol., No 6, 1959, No 24813

Author : Izinger, P.

Inst : -

Title : Sowing Periods of Winter Wheat (in Hungary).

Orig Pub : Magyar mezogazd., 1958, 13, No. 14, 3-4

Abstract : No abstract.

Card : 1/1

IZJUMOVA, N.A.

On parasitic diseases in fish dangerous to man in the zone of water
supply. Wiadomosci parazyt., Warsz. 5 no.4-5:445-451 1959.
(PARASITIC DISEASES, transm.) (FISH, parasitol)

EXCERPTA MEDICA Sec 16 Vol 7/11 Cancer November 59

4955. **Osteogenic sarcoma of the patella (Russian text)** Izko D. A. Inst. of Oncol., AMS, Leningrad *Vopr. Onkol.* 1959, 5:4 (485-488) Illus. 2

In the literature 23 cases were found, and 2 new cases are reported: (1) In a man of 42 a metastasis in the region of the 8th-10th rib had to be removed one year and 3 months after removal of the patella; 10 months later he died, and at autopsy metastases were found in vertebrae, dura mater, right lung, right kidney, region of the 8th-9th right ribs. (2) A woman of 58 who was given a course of roentgen therapy; no late results could be obtained.

IZLEGOSHCHIN, A.

Progressive features in Stalingrad. Prof.-tekh. obr. 17 no.7:6
Jl '60. (MIRA 13:8)

1. Zamestitel' direktora po uchebno-proizvodstvennoy rabote
remeslennogo uchilishcha No.1.
(Stalingrad--Vocational education)

RODYAKIN, N.F.; CHERNYAK, E.N.; IZMAILOV, A.M.; ABRAMYAN, A.A.

Possible poisoning by toxic chemicals used in agriculture.
Zdrav. Turk. 8 no.2:28-30 F'64 (MIRA 17:4)

1. Iz Turkmenskogo nauchno-issledovatel'skogo instituta kozh-
nykh bolezney (direktor - M.E. Kreshov, nauchnyy rukovoditel'
prof. N.F. Rodyakin).

IZMAILOV, I. A. (Assistant Professor) and MAROSHKIN, B. P. (Doctor of Veterinary Sciences, L'vov Zooveterinary Institute)

"Etiology and pathogenesis of Stachybotrys toxicosis in horned cattle"

Veterinariya, vol. 39, no. 4, April 1962 p. 27

IZMAILOV, T.U.

Change in the butterfat content of milk in relation to the
biochemical processes in the rumen. Preliminary report. Trudy
Inst.fiziol. AN Kazakh.SSR 2:117-119 '59. (MIRA 13:7)
(RUMEN) (COWS--PHYSIOLOGY)
(DAIRY CATTLE--FEEDING AND FEEDING STUFFS) (BUTTERFAT)

IZMAILOV, T.U.

Parietal digestion in the rumen of cattle. Izv. AN Kazakh.
SSR. Ser. biol. nauk 3 no.5:84-87 S-O '65. (MIRA 18:11)

BAZANOVA, N.U.; IZMAILOV, T.U.

Effect of acidophilic and lactic paste from corn on the fermentation processes in rumen. Trudy Inst. mikrobiol. i virus. AN
Kazakh. SSR 5:58-62 '61. (MIRA 15:4)
(Lactic acid bacteria) (Rumen--Microbiology)
(Milk--Composition)

IZMAILOV, T.U.; URAZGALIYEV, A.

Digestibility of cellulose in the rumen of ruminants in connection with their age. Izv. AN Kazakh. SSR. Ser. biol. nauk 3 no.1:103-105 Ja-F '65.

(MIRA 18:5)

The economics of large-panel housing construction. Bud.mat.1
konstr. no.5:11-12 S-0 '62. (MIRA 15:11)
(Construction industry) (Kiev--Apartment houses)

Benzidine bases. V. A. Imantskii. Russ. 110, Apr. 23, 1921. In the preparation of bases of benzidine, toluidine or bianthidine many and azo compounds are reduced by Zn or Fe in the presence of indifferent hydrocarbons as solvents and the hydrosy compounds are rearranged in the presence of a mineral acid, particularly H_2SO_4 .

Alkyl nitrophenyl ethers. V. A. Imantskii and H. A. Rasumov. Russ. 101, Sept. 30, 1926. Alkyl esters of aromatic sulfonic acids are acted upon with nitrophenols in the presence of aq. solns. of alkali or alk. earth hydroxides.

Insoluble blamuth compositions. V. A. Imantskii. Russ. 24,881, Jan. 14, 1926. A freshly prepd. paste or suspension of complex blamuth acids with hydrosy acids of the fatty series, such as tartaric or citric acids, is treated in cold or with the application of heat with freshly prepd. blamuth hydroside in an amount that corresponds to the number of carbonyl groups of the complex acid.

Trinitro- and triamino-4-arylamino-benzenesulfonic acids. V. A. Imantskii and A. M. Stomov. Russ. 28,217, Nov. 22, 1928. Substances which do not contain carboxylic groups, such as primary aromatic amines or di-*p*-diamines of the diaryl series or their nucleus substituted deriva. are made to act, in the presence of substances able to split off HCl, on 3-nitro-4-chlorobenzenesulfonic acid. The compounds obtained are reduced to amines in the usual manner.

ASB. SLA METALLURGICAL LITERATURE CLASSIFICATION

2A

16

Hydrotoluene V. A. Immanuel and E. P. Rostovtsov, Russ. J. Chem. 21, 1020, 1950. Addn. to Russ. J. Chem. 21, 1021, 1950. Reduction was carried out in the first phase in the presence of 0.15 to 0.4 mols. of NaOH per mol. of nitrobenzene at an original concn. of NaOH amounting to 45-50%, and at a temp. of 75-80°, while in the second phase the concn. of NaOH is lowered by diln. to 2-6%, and the reaction conducted at 55-60°.

ASB 51A METALLURGICAL LITERATURE CLASSIFICATION

Reducing azoxybenzene, azoxytoluene or azoxyanisole to hydrazo compounds.
V. A. IZMAIL'NIK and V. N. KOLPANSKIY. Russ. 20,172, Mar. 27, 1950. Azoxy compounds are reduced with iron in an alk. medium at temps. below 80° in the presence of an inert liquid org. solvent, such as C_6H_6 its Cl derivs., etc., until the soln. becomes colorless. The hydrazo compounds are sepd. or are rearranged in soln. with acid to benzaniline, etc., by the usual methods.

Azoxy compounds. V. A. IZMAILKIN, K. P. RUSTAMOVICH and V. G. GABRIELMAN, Russ. Zh. Khim., Aug. 2, 1960. Nitro compounds are reduced in an alk. medium with Fe preliminarily treated with caustic at a temp. not exceeding 60°.

cc 10

Polybismuth compounds of hydroxy fatty acids. V. A. Izmailskii, Russ. 23,888, Oct. 31, 1931. A soln. of an alkali salt of mono- or di bismuth compd. of a hydroxy fatty acid is treated with an alk. soln. with one or more mols. of $\text{Bi}(\text{OH})_3$ in a polyatomic alc. such as glycerol and the reaction product is sepd. from the soln. by the action of acid.

Hydrazo compounds. V. A. Izmailskii and V. N. Kulpenkii, Russ. 23,106, Oct. 31, 1931. Hydrazo compounds are prepd. from nitro compds. which do not contain any amine groups by reduction with Zn dust in an alk. medium in two phases. In the first phase an amt. of Zn insufficient for the production of hydrazo compds. is gradually introduced at 75-100°; after the complete disappearance of NO_2 compds. the temp. of the reaction mixt. is lowered by 15-35° and there is rapidly added enough Zn dust to bring the reaction to an end.

ASD 35A METALLURGICAL LITERATURE CLASSIFICATION

Loces in the production of benzidine bases and the reductive cleavage of aromatic hydrazone compounds during rearrangement. III. V. A. IMAILSKII, R. P. MUSTANOVICH AND P. T. SUPRENTENKO. *Antikrazachnyye Prom.*, No. 3, 10-16 (1933); cf. I. and Kolpenskii, *C. A.* 30, 223, 2123; I. and Arbusov, *J. Chem. Ind. (Moscow)* 1, No. 3-6, 26 (1926).—The losses in the production of benzidine (I) here considered are those caused principally in reworking of the hydrazone compd. (II) by extn. and in the process of rearrangement. The sharp difference in the action of HCl and H₂SO₄ is also studied. First of all, in the prepn. of II the formation of PhNH₂ is considered, as also studied by carrying out the process in 2 stages: 1st, the reduction of PhNO₂ to anisobenzene with Zn dust in an alk. medium, and 2nd, the reduction of anisobenzene to II at 37-45° at low alk. concn., the best results (1-2% of PhNH₂ or 2-3% of *o*-C₆H₄(NH₂)Me) being obtained by reduction of the azoxy compd. with Fe at 3-4% concn. (cf. I. and Kolpenskii, U. S. S. R. pat. 2176 (1926)). In the extn. of II from the reduction sludge at 100° or over, a considerable part of II is decompd. with formation of amines: 2RNHNH₂ → 2RNH₂ + RN:NR (Wieland, *C. A.* 6, 1596), and in the case of (PhNH₂) at 85° in acetylment under normal conditions, the yield of I was reduced from 80.3 to 75.8% with formation of 4.6% of azo compd. and 5% of PhNH₂. Amines are formed in the process of rearrangement; the reaction can begin at about 0° and progresses rapidly with increase in temp. This reductive decompn. is greater with HCl than with H₂SO₄. Conclusions: The extn. of II from the sludge should be made at lower temp., and the rearrangement procedure carried out without the sepn. of II from its soln. in hydrocarbon. The best solvents for II are PhCl and the liquid fraction of C₆H₄Cl₂, in which 7% of II is sol. at 70°, but only 1.6% in petroleum hydrocarbons at 80° (8.4% at 95°). The work is being continued.

CHAM BLANC

Dimethylbenzylammonium chloride. V. A. Ismailov and G. K. Danchev. Russ. J. Chem. 30, 149, Nov. 30, 1963. PhCH_2Cl is treated with PhNMe_2 in the presence of 1-5% of arylsulfonyl chloride, MeOH or EtOH as accelerators.

10

CA

3-Nitro-4-hydroxybenzenesulfonic acid from *p*-chloro-aniline (and from 2-nitrodiphenylamine-4-sulfonic acid).
 V. A. Izmailov and A. M. Shumov. Khim. Farm. Prom. 1933, 317-20. *p*-Chloroaniline is the most economical starting material; it is made from $p\text{-ClC}_6\text{H}_4\text{NO}_2$ by neutral reduction with Fe and NaCl (7 hrs. boiling) or with Fe and HCl, steam-distilled and transformed into $p\text{-ClC}_6\text{H}_4\text{SO}_3\text{H}$ according to Hart-Schmidt, with about 80% yield. $4\text{-ClC}_6\text{H}_4\text{NO}_2$ is made by nitration of $p\text{-ClC}_6\text{H}_4\text{SO}_3\text{H}$ with HNO_3 and an excess of KNO_3 at 100° . Fourteen g. of the nitro acid is dissolved in 50 g. of 40% NaOH and stirred at 85° for 10 hrs. Thirty cc. of H_2O and 25 cc. of HCl are added, the soln. is filtered with charcoal at 80° , acidified with another 16 cc. of HCl and set to crystallize; the yield of $4\text{-ClC}_6\text{H}_4\text{SO}_3\text{H}$ and set to crystallize; the yield of $4\text{-ClC}_6\text{H}_4\text{SO}_3\text{H}$ is 64%. These conditions were found best on 14 different expts. In the 2nd method 3,4- $\text{Cl}_2\text{N}(\text{Ph})\text{SO}_3\text{H}$ is made from the 4-Cl acid by boiling for 10 hrs. with N NaOH and fresh aniline. The excess of aniline is distd. with steam, and the ppt. washed, dried and saponified for 8 hrs. with 25% NaOH. The aniline is e. upol. and 4,3- $\text{HO}(\text{O}_2\text{N})\text{C}_6\text{H}_3\text{SO}_3\text{H}$ is crystal. as before. I. Namsrevich

ASD-55A METALLURGICAL LITERATURE CLASSIFICATION

1124 0 04179

1st and 2nd orders

PRECEDENCE AND PRIORITY INDEX

17

LA

Determination of diphenylene in benzidine. V. A. Irmal'skii and R. B. Roshal. *Antisobremchennyye Priem* 6, 407-12 (1951). -The absorbed diphenylene in benzidine can be best detd. by converting the sulfates into the chlorides with BaCl₂ and HCl at 85°, then twice pptg the benzidine in the filtrate with H₂SO₄ at 85°, distg. off any PhNH₂ from the alk. filtrate and detg. as (PhNH₂)₂ · H₂SO₄. Diphenylene is detd. by the difference or by titration of the HCl filtrate with NaNO₂. C. B.

ASB-16A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									
<p>CA</p> <p>Bismuth-tartaric acid compounds. VII. Action of ammonia on bismuth-tartaric acid. V. A. Ismailkhil and S. S. Kaganova. <i>Rev.</i> 66B, 415-21(1936); cf. <i>Soviet Vestnik Venerologii i Dermatologii</i> 1934.—Rosenheim and Vorelsang (<i>Z. anorg. Chem.</i> 48, 212(1906)), as confirmed by R. et al. (<i>C. A.</i> 26, 1871), obtained from "Bi bitartrate" and excess of 25% aq. NH₃ an NH₃ compd. which after long standing and evapn. seps. as a cryst. water-insol. powder which they formulate as NH₃ anhydrous-bismuth-tartrate (I). The fact that it seps. from and is insol. in water raised doubts as to the correctness of such a structure, and the action of NH₃ on bismuth-tartaric acid</p>																			
<p>CO₂CH₂CHCO₂NH₃</p> <p>O O O</p> <p>Bi</p> <p>(I)</p>										<p>HOCH₂CO₂CH₂CH(OH)CO₂NH₃</p> <p>(II)</p>									
<p>[HOCH₂CO₂CH₂CH(OH)CO₂]₂NH₃</p> <p>(III)</p>										<p>NH₃...Bi...O₂CO₂CH₂CH(OH)CO₂</p> <p>(IV)</p>									
<p>[NH₃...Bi...O₂CO₂CH₂CH(OH)CO₂]</p> <p>(V)</p>										<p>(further)</p>									
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
<p>ESOM DIVISION</p>																			
<p>100000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000</p>																			

BC

2-3

Decomposition of methoxymethyl salicylate. Prismatic crystals of salicylic acid. V. A. IMANLSKI and B. M. BOGOSLOVSKI (J. Gen. Chem. Russ., 1936, 6, 1193-1197).—A sample of methoxymethyl salicylate (I) had undergone decomp. after remaining for 8 years in a stoppered bottle, at room temp., to yield a mixture of products, of which salicylic acid (II), 2-hydroxy-2-allylbenzoic acid, 2-hydroxyisophthalic acid, and 2-hydroxymethylsalicylic acid (III) were identified. The probable reactions are: (I) + H₂O → (II) + CH₃O + MeOH; (II) + CH₃O → (III). The (II) crystallizes from the reaction mixture in the form of rectangular prisms. R. T.

ADDITIONAL METALLURGICAL LITERATURE CLASSIFICATION

CLASSIFICATION	CLASSIFICATION	CLASSIFICATION	CLASSIFICATION
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

CA

Dyeing with ice colors. V. A. Ismail'skii and V. I.

Stavrovskaya. Russ. 51,918, Oct. 31, 1937. Fabric is treated with a soln. of β -naphthol or Naphthol AS and then with a soln. of diazo compd. obtained from 1-amino-2,5-dimethyl-4-benzoylamino benzene.

454-514 METALLURGICAL LITERATURE CLASSIFICATION

Separated auxo-enol systems II. The color of the nitrobenzoyl derivatives of the aromatic amines. V. A.

Ismail'skiĭ and E. A. Smirnov. *Bull. soc. chim.* [5] 4, 81-84 (1937); cf. C. A. 30, 8184⁹.—The general study of compds. of the type $O_2NC_6H_4QC_6H_4(auxo)$ where "auxo" represents an auxochrome group and Q a group confg. a double bond ($-CH=CH-$, $-CH=N-$, $-N=N-$) is extended to compds. in which Q is $-CONH-$ and $-CO-NR-$ and the continuity of the conjugated chain is thus destroyed. However, the color remains which perhaps results from the possible tautomerization $-CONH-$ \rightleftharpoons $-C(OH)=N-$ which would restore the conjugated chain. In the absence of either the $-NO_2$ or auxo group the compd. is colorless while $-NMe_2$ produces a stronger effect than $-OH$ as an auxo group. The intense color ranging from yellow to dark red is close to that of the corresponding conjugated chain systems. New compds. prepd. are 3-[3-nitrobenzamino]phenol, m. 219°, light yellow, 4-[3-nitrobenzamino]phenol, m. 224°, light yellow, 4-[N-methyl-3-nitrobenzamino]phenol, m. 224°, pale yellow, 4-[N-methyl-4-nitrobenzamino]phenol, m. 214°, yellow, N,N-dimethyl-N'-[4-nitrobenzoyl]-m-phenylenediamine, m. 188°, orange-red, N,N-dimethyl-N'-[3-nitrobenzoyl]-m-phenylenediamine, m. 176°, orange, N,N-dimethyl-N'-[3-nitrobenzoyl]-p-phenylene-

diamine, m. 174°, dark red, N,N-dimethyl-N'-[4-nitrobenzoyl]-p-phenylenediamine, m. 258.5°, dark red. III The influence of the position of the nitro and auxo groups on the color of the nitrobenzoylarylamides (34, 35) 111. The influence on the color of the simultaneous presence in the mol. $O_2NC_6H_4C_6H_4NHC_6H_4(auxo)$ of 2 chromophoric groups, one corresponding to the type of the auxochrome group (the terms *auxochrome* or *auxophore* are proposed to indicate the polar chromophoric groups of the type NO_2 , CO and quanine group instead of the unjustified term "anti-auxochrome"), *m*- or *p*- $O_2NC_6H_4CO_2$, and the other corresponding to the auxo-enol chromophoric system *m*- or *p*-(auxo) $C_6H_4NHCO_2$ is studied spectrographically. The introduction of the *p*- NO_2 group in the benzoylated part of the mol. exercises approximately the same bathochromic effect as the *p*- NMe_2 group. The simultaneous effect of the NO_2 group and the auxo group is to accentuate their bathochromic effect which is greatest for the *p,p'* relationship and least for the *m,m'* relationship with the *m,p'* and the *p,m'* relationships intermediate. The cause of the strongly chromophoric properties of the *p*-di-auxo and *p*-di-auxophore systems is to be sought in their contra-inductive natures due to their occupying the even positions in the enol structure while the weaker chromophoric properties of the *m*-isomers result from their *syn*-inductive nature due to their occupying the odd positions in the enol structure.

A. P. Sachy

Singular crystallization forms of certain derivatives of
1-azido-2-methyl-4-benzoylbenzene. V. A. Ignat'ev and V. I. Stavitskiy
J. Gen. Chem. (U. S. S. R.) 7, 803 (1937).--Certain
derivs. of 2,4,6-Me(BzNH)(MeO)C₆H₃NH₂ (I) (cf
Kishner and Krasova, C. A. 27, 6319) tend to form
crystals of singular structures. The condensation prod-
ucts and azo derivs. give long, hair-like needles or crys-

tals of curved formation of crescent- and spiral like pat-
terns. The p-O₂NC₆H₄COCl deriv., m. 201°, crystal-
lized from C₆H₆N in light yellow long needles interlaced into
a felt-like mass. The condensation product of p-O₂NC₆H₄-
H₂CHO with I recrystd. from alc. gave red-orange,
crescent-shaped plates, m. 103°. The azo deriv., m.
231-2° (decompn.), obtained from diazotized I and *p*-
naphthol, crystal. from C₆H₆ in a compact mass consisting
of straight and curved long needles. The product of
condensation of diazotized I and PhNMe₂ in alc. gave
orange spirals of long filaments, m. 172-2.5°. The
effect of the structure and the medium on the crystal. of
the compds. of this type is being investigated.

Chav. Blum

ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION

"Sur la formation de l'ether ethylique pendant L'ethylation au moyen du chlorure d'ethyle
Certaines analogies theoriques. Communication V." Izmailskii, W. A. et Popov, B. M.
(p. 111)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii). 1937, Volume 7, No. 1.

10

The structure and toxicity of arslate acids of the di-phenylamine series. V. A. Tsimak and A. M. Simonov. *J. Gen. Chem. (U.S.S.R.)* 7, 400 (1937); *Bull. soc. chim. [5]*, 3, 1739 (1936). 4,3-Cl(O₂N)-C₆H₃AsO₂H₂ condenses with substituted PhNH₂ to form RNHC₆H₃(NO₂)AsO₂H₂. Reduction of the NO₂ group gives the corresponding amino acids. Introduction of OH or NHCOMe in the ring which does not contain As lowers the toxicity of these acids. The order of min. lethal dose is *m*-OH > *p*-OH and *m*-NHCOMe > *p*-NHCOMe. Etherification of the OH group raises the toxicity, but all the acids have relatively low toxicities in spite of the presence of the toxic NO₂ group. The inductive effect of the aryl groups on the As is evident, since the *m*- and *p*-compds. have different toxicities. The oxidizability of the compds. is probably also a factor. Attempts to prep. *o*-substituted compds. were unsuccessful. Toxicities are reported for the following diphenylamine-4-arsonic acids: 2-nitro, 3'- and 4'-acetamino-2-nitro, 4'-hydroxy-2-nitro and its Et ether, 3'-hydroxy-2-nitro and its Me ether, 2-amino and its 4'-hydroxy, acetamino and ethoxy and 3'-acetamino derivs., and 4-benzidine-3-nitrophenylarsonic acid. H. M. Leicester

BC

Colour of 2-nitrodiphenylamine-4-arsinic acid derivatives containing additional amino-groups.
 1. Azo-acid systems separated from the chromophore. V. A. ISMAILSKI and A. M. SMOLOV (J. Gen. Chem. Russ. 1937, 7, 508-512; cf. preceding abstract).—The influence of substituents on the colour of diphenylamine-4-arsinic acid derivatives is discussed.
 R. T.

ABB-51A METALLURGICAL LITERATURE CLASSIFICATION

GROUP	CLASS	SUBCLASS	DETAILS
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

PRECEDENCE AND PRIORITY INDEX																																																																																																									
BC	<p>Colour of 2-nitrodiphenylamine-4-aminic acid derivatives, containing additional auxo-groups.</p> <p>II. Colour of nitrobenzoyl derivatives of aromatic amines. III. Influence of position of nitro- and auxo-groups on colour of nitrobenzoylarylamines. V. A. ISMAHANI and E. A. SMIRNOV (J. Gen. Chem. Russ. 1937, 7, 513-522, 523-537; cf. this vol., 287).—II. The CO-NH group is shown to act as a chromophore in a no. of m- and p-nitrobenzoyl derivatives of substituted anilines, the intensity of coloration depending on the nature and position of the auxochrome groups. The N-p-nitrobenzoyl derivatives of m-aminophenol, m.p. 212°, p-anilidine, m.p. 197°, m-, m.p. 186°, and p-dimethylaminocaniline, m.p. 258.5°, and the m-nitrobenzoyl derivatives of m-aminophenol, m.p. 219°, p-anilidine, m.p. 174.5°, p-N-methylaminophenol, m.p. 224°, m-, m.p. 176°, and p-dimethylaminocaniline, m.p. 173°, are described.</p> <p>III. The absorption spectra of the above compounds are given, and the causes of differences in absorption for m- and p-substituted compounds are discussed.</p> <p>R. T.</p>																																																																																																								
ASAC-55A METALLURGICAL LITERATURE CLASSIFICATION																																																																																																									
<table border="1"> <thead> <tr> <th>SECTION NO.</th> <th>SECTION NO. ONLY</th> <th>SECTION NO. ONLY</th> <th>SECTION NO. ONLY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>5</td> <td>6</td> <td>7</td> <td>8</td> </tr> <tr> <td>9</td> <td>10</td> <td>11</td> <td>12</td> </tr> <tr> <td>13</td> <td>14</td> <td>15</td> <td>16</td> </tr> <tr> <td>17</td> <td>18</td> <td>19</td> <td>20</td> </tr> <tr> <td>21</td> <td>22</td> <td>23</td> <td>24</td> </tr> <tr> <td>25</td> <td>26</td> <td>27</td> <td>28</td> </tr> <tr> <td>29</td> <td>30</td> <td>31</td> <td>32</td> </tr> <tr> <td>33</td> <td>34</td> <td>35</td> <td>36</td> </tr> <tr> <td>37</td> <td>38</td> <td>39</td> <td>40</td> </tr> <tr> <td>41</td> <td>42</td> <td>43</td> <td>44</td> </tr> <tr> <td>45</td> <td>46</td> <td>47</td> <td>48</td> </tr> <tr> <td>49</td> <td>50</td> <td>51</td> <td>52</td> </tr> <tr> <td>53</td> <td>54</td> <td>55</td> <td>56</td> </tr> <tr> <td>57</td> <td>58</td> <td>59</td> <td>60</td> </tr> <tr> <td>61</td> <td>62</td> <td>63</td> <td>64</td> </tr> <tr> <td>65</td> <td>66</td> <td>67</td> <td>68</td> </tr> <tr> <td>69</td> <td>70</td> <td>71</td> <td>72</td> </tr> <tr> <td>73</td> <td>74</td> <td>75</td> <td>76</td> </tr> <tr> <td>77</td> <td>78</td> <td>79</td> <td>80</td> </tr> <tr> <td>81</td> <td>82</td> <td>83</td> <td>84</td> </tr> <tr> <td>85</td> <td>86</td> <td>87</td> <td>88</td> </tr> <tr> <td>89</td> <td>90</td> <td>91</td> <td>92</td> </tr> <tr> <td>93</td> <td>94</td> <td>95</td> <td>96</td> </tr> <tr> <td>97</td> <td>98</td> <td>99</td> <td>100</td> </tr> </tbody> </table>		SECTION NO.	SECTION NO. ONLY	SECTION NO. ONLY	SECTION NO. ONLY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
SECTION NO.	SECTION NO. ONLY	SECTION NO. ONLY	SECTION NO. ONLY																																																																																																						
1	2	3	4																																																																																																						
5	6	7	8																																																																																																						
9	10	11	12																																																																																																						
13	14	15	16																																																																																																						
17	18	19	20																																																																																																						
21	22	23	24																																																																																																						
25	26	27	28																																																																																																						
29	30	31	32																																																																																																						
33	34	35	36																																																																																																						
37	38	39	40																																																																																																						
41	42	43	44																																																																																																						
45	46	47	48																																																																																																						
49	50	51	52																																																																																																						
53	54	55	56																																																																																																						
57	58	59	60																																																																																																						
61	62	63	64																																																																																																						
65	66	67	68																																																																																																						
69	70	71	72																																																																																																						
73	74	75	76																																																																																																						
77	78	79	80																																																																																																						
81	82	83	84																																																																																																						
85	86	87	88																																																																																																						
89	90	91	92																																																																																																						
93	94	95	96																																																																																																						
97	98	99	100																																																																																																						

PROCESSING AND PROPERTY INDEX

The color of the nitrobenzoyl derivatives of the aromatic amines. IV. Azo-enol systems separated by the chromophore. V. A. Izmail'skii and B. M. Bogdanovskii. *Compt. rend. acad. sci. U. R. S. S.* 14, 17-22 (1957) (in German); cf. *C. A.* 51, 2184¹.—Compds. of the type $O_2NC_6H_4QC_6H_4$ (azo), where Q is $—CO.N(CH_2Ph)—$, were prep'd. to det. whether the deep color with comp'ds. where Q is $—CONH—$ is due to the tautomerization $—CONH— \rightleftharpoons —C(OH)=N—$. In spite of the impossibility of tautomerization in $—CO.N(CH_2Ph)—$ the comp'd. $O_2NC_6H_4CON(CH_2Ph)C_6H_4NMe_2$ is intensely red and is due to the unbroken conjugated chain between azo- NMe_2 and the azichromophore NH_2 . *N*-Benzyl-*N*-(4-nitrobenzoyl)-*p*-aminophenol, m. 180-1^o, pale yellow plates; *N*-benzyl-*N*-(4-nitrobenzoyl)-*p*-phenetidine, m. 101-2^o, pale yellow needles; *N*-(*N*-dimethyl-*N'*-benzyl-*N'*) (4-nitrobenzoyl)-*p*-phenylenediamine, m. 118-19^o, intensely red coarse prisms. A. P. 5.

Diphenyl-*p*-tolylamine and phenyl-di-*p*-tolylamine. Ralph J. B. Marston. *J. Chem. Soc.* 1937, 627. Heating 4 g. $PhNH_2$, 13 g. $p-IC_6H_4Me$, 8 g. K_2CO_3 and 2 g. Cu bronze in 50 cc. $PhNO_2$ for 9 hrs. gives 1.5 g. diphenyl-*p*-tolylamine, very pale yellowish white, m. 68-73^o (in p - ClC_6H_4). ($p-MeC_6H_4$) $_2NH$ (10 g.), 10.3 g. PhI , 7 g. K_2CO_3 and 2 g. Cu bronze in 50 cc. $PhNO_2$, heated 11 hrs., give 4 g. phenyl-di-*p*-tolylamine, pale yellow, m. 100^o.

C. J. West

Separated auxo-enoid systems V The color of nitrobenzoyl derivatives of aromatic amines V. A. Azamail'skii and E. A. Smirnov. *J. Gen. Chem.* (U. S. S. R.) 8, 1730-40 (in English, 1740-1) (1938), (J. C. A. 31, 4280); 33, 3353¹⁹³⁹. The influence on the color of the simultaneous presence in the mol. $O_2NC_6H_4CONHC_6H_4$ -(auxo) (I) of 2 chromophoric groups, one corresponding to the nitro-enoid system *m*- or *p*- $O_2NC_6H_4CO$ - and the other corresponding to the auxo-enoid system *m*- or *p*- $(auxo)C_6H_4NHC=O$ - is studied by fusing or dissolving in hot alc. or C_6H_6 2 compds., one of which contains the corresponding nitro-enoid system and the other contains the auxo-enoid system present in I. The resulting complex compds. in the melt or soln. have practically identical colors with the corresponding I derivs. Thus, the color of the fusion complex from *p*- $O_2NC_6H_4CO_2Me$ and *p*- $AcNHC_6H_4OH$ is identical with that of *N*-4-nitrobenzoyl-*p*-aminophenol and that from *p*- $O_2NC_6H_4CO_2Me$ and *p*- $AcNHC_6H_4NMe_2$ is identical in color with *N,N*-dimethyl-*N'*-(4-nitrobenzoyl)-*p*-phenylenediamine. It is therefore evident that the color of the complexes formed by fusion or soln. of nitro compds. with amines and phenols is conditioned by the interaction of the sep. systems, one of which contains the NO_2 group (nitro-enoid system) and the other contains the auxo group (auxo-enoid system). In I this interaction between the 2 systems takes place within the same mol. Chas. Blanc.

ASACSLA METALLURGICAL LITERATURE CLASSIFICATION

Alkylation. VI. Saponification of ethyl chloride by the action of alkaline agents. V. A. Izmail'skiĭ and B. V. Popov. *J. Gen. Chem.* (U. S. S. R.) 8, 695-7 (in French 698) (1938); cf. *C. A.* 31, 1700^a.—Previously it was shown that in the ethylation of m -H₂NC₆H₄OH in 90% alc. in the presence of NaOH 43.6% of the EtCl is sapon. in secondary reactions and that 56% of this amt. is transformed into Et₂O. The comparative sapon. action of NaOH, Na₂CO₃, MgO and CaO was studied as possible means for the reduction of the required excess of EtCl in the alkylation of amines and phenols. To this end, equimol. mixes. of EtCl and alkalis in 83.0-96% alc. were autoclaved at 125° for 3-12 hrs. The unaltered EtCl and Et₂O were driven off and the degree of EtCl sapon. was detd. by analyzing Cl⁻ in the distn. residue. NaOH sapon. 93.9% EtCl in 80% alc. (7.5 hrs.), Na₂CO₃ 19.67% in 90% alc. and 41.34% in 94% alc., MgO 27.55% in 87.3% alc. and CaO 3.84% in 90% alc. and 28% in 87% alc. The reduction of the sapon. rate by the action of NaOH in the presence of NaCl (Teupel, Ger. pat. 488,348, 433,348) is ascribed to decreased soly. of EtCl and the disson. of NaOH. An analogous effect is produced by the use of higher concns. of NaOH. Chas. Blanc

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

830M 579.01194

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92

5a7740 92